

What is claimed is:

1 1. An organism-compatible material with combined extracellular matrices comprising a base made of a material for organisms, a calcification layer formed on the base, and extracellular matrices formed on the layer by cells of a region of an organism to which the organism-compatible material with combined extracellular matrices is to be applied

1 2. An organism-compatible material with combined extracellular matrices as claimed in claim 1 of which the base is of titanium, a titanium alloy, or a calcium-phosphate compound such as hydroxyapatite, or a piece of glass, a piece of a polymer or a ceramic overlaid with titanium, a titanium alloy, or a calcium-phosphate compound such as hydroxyapatite.

1 Sub A1 > 3. An organism-compatible material with combined extracellular matrices as claimed in claim 1 or 2, wherein said cells are osteoblasts, chondroblasts, tendon cells, vascular endothelial cells, epithelial cells, connective tissue cells, or glia cells.

1 Sub A2 > 4. An organism-compatible material with combined extracellular matrices as claimed in claim 1, 2, or 3 which includes said cells.

1 5. A production method of an organism-compatible material with combined extracellular matrices, wherein cells of a region of an organism, to which the material is to be applied, are cultured on a base made of titanium or a titanium alloy in a culture solution and, thereby, extracellular matrices are formed between a calcification layer formed on the base and the cells.

1 6. A production method of an organism-compatible material
2 with combined extracellular matrices, comprising the steps of:
3 culturing cells of a region of an organism, to which the mate-
4 rial is to be applied, on a base made of titanium or a titanium alloy in a
5 culture solution to form extracellular matrices between a calcification
6 layer formed on the base and the cells; and
7 removing the cells.

1 *Sub A3* > 7. A production method of an organism-compatible material
2 with combined extracellular matrices as claimed in claim 5 or 6, wherein
3 the base is a piece of glass, a piece of a polymer, or a ceramic overlaid with
4 titanium or a titanium alloy.

1 *Sub A4* > 8. A production method of an organism-compatible material
2 with combined extracellular matrices as claimed in claim 5, 6, or 7,
3 wherein a calcification layer is formed on a surface of the base in a culture
4 solution in advance.

1 9. A production method of an organism-compatible material
2 with combined extracellular matrices comprising the steps of:
3 culturing cells of a region of an organism, to which the mate-
4 rial is to be applied, on a base of titanium or a titanium alloy in a culture
5 solution to form extracellular matrices between a calcification layer
6 formed on the base and the cells;
7 removing the cells;
8 decalcifying the base with the calcification layer and the ex-
9 tracellular matrices to obtain suspension of the extracellular matrices;
10 concentrating the suspension; and
11 combining the extracellular matrices in the concentrated sus-
12 pension with another base made of titanium or a titanium alloy.

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1 10. An extracellular-matrix preparation for injection which is
2 prepared from extracellular matrices formed by cells of a region of an or-
3 ganism, into which the preparation is to be injected, by concentrating and
4 processing the extracellular matrices.

1 11. An extracellular-matrix ointment which is prepared from
2 concentrated fluid of extracellular matrices formed by cells of a region of
3 an organism, to which the ointment is to be applied, and an ointment base.

1 12. A production method of an extracellular-matrix prepara-
2 tion for injection comprising the steps of:

3 culturing cells of a region of an organism, into which the
4 preparation is to be injected, on a base of titanium or a titanium alloy in a
5 culture solution to form extracellular matrices between a calcification
6 layer formed on the base and the cells;

7 removing the cells;

8 decalcifying the base with the calcification layer and the ex-
9 tracellular matrices to obtain suspension of the extracellular matrices;

10 concentrating the suspension by dialysis;

11 sterilizing the concentrated suspension; and

12 preparing the preparation for injection from the concentrated
13 suspension.

1 13. A production method of an extracellular-matrix ointment
2 comprising the steps of:

3 culturing cells of a region of an organism, to which the oint-
4 ment is to be applied, on a base of titanium or a titanium alloy in a culture
5 solution to form extracellular matrices between a calcification layer
6 formed on the base and the cells;

7 removing the cells;

8 decalcifying the base with the calcification layer and the ex-

9 tracellular matrices to obtain suspension of the extracellular matrices;
10 concentrating the suspension; and
11 adding an ointment base to the concentrated suspension to
12 prepare the ointment from the concentrated suspension.

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